

Serial No.: 09/183,715

Filing Date: October 30, 1998

Attorney Docket No. 100.104US01

Title: USING ALTERNATE POLARIZATION IN FIXED WIRELESS SYSTEM DEPLOYMENT FOR  
IMPROVED CAPACITY**REMARKS**

Applicant has reviewed the Office Action mailed on August 23, 2001, and the references cited therewith. Claims 1 and 21 are amended, and claims 40-54 are added. Claims 1-54 are now pending in this application. Applicant contends that all amendments to the claims are supported by the Specification as filed and thus do not constitute new matter.

**Rejection Under 35 U.S.C. §102(e)**

Claims 1-39 were rejected under 35 U.S.C. §102(e) as being anticipated by Bossard et al (U.S. Patent 5,949,793).

The Examiner rejected claims 1-2, 12, 15, 21-22, 31, and 34 under 35 U.S.C. §102(e) as being anticipated by Bossard et al., stating that Bossard et al. discloses a transmission of digital and analog signals in the same band comprising a number of communication circuits disposed to divide a region in to communication areas; wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area; wherein adjacent portions of communication areas of different communication circuits use the same polarization.

Applicant respectfully traverses this rejection and requests reconsideration of the claims 1-2, 12, 15, 21-22, 31, and 34. Claims 1 and 12 are directed to a communication system wherein adjacent portions of communication areas of different communication circuits use the same polarization. It is respectfully submitted that the communications system illustrated in Fig. 4 of Bossard et al. should be considered in its entirety. Consideration of this system in its entirety reveals adjacent portions of communication areas of different communications circuits using different polarizations, e.g., the sector of cell 450 (AV, DH) that is vertically adjacent to sector 443 of cell 440. Therefore, Fig. 4 does not teach a communications system where adjacent portions of communication areas of different communications circuits use the same polarization only and does not show what is covered in claims 1 and 12.

Considering claims 21 and 31. Claim 21 is directed to dividing a region into communication areas that include a communication circuit, wherein a first portion of each communication area communicates with a first polarization and a second portion of the communication area communicates with a second polarization such that adjacent portions of communication areas of different communication circuits use the same polarization. Claim 31 is directed to forming boundaries between communication regions with communication circuits, wherein a first region communicates with a first polarization and an adjacent region communicates with a second polarization. For example, as demonstrated in Figure 1, communication circuits 110, 120 and 130 are disposed in region 100 to form boundaries between communication regions 430, 440, 450 and 460. Communication circuits 110, 120 and 130 communicate a signal of either a first or second polarization dependent upon which of the communication regions 430, 440, 450 and 460 the circuits are communicating toward. Communication circuits 110 and 120 communicate a signal of one polarization only for adjacent portions 250 and 240 of communication areas 140 and 150, respectively. The adjacent portions 250 and 240 of communication areas 140 and 150 are part of communication region 440. The boundaries between of communication regions 430 and 440, and 440 and 450 divide communication areas 140 and 150, respectively. It is respectfully submitted that Fig. 4 of Bossard et al. does not teach a method for forming adjacent communication regions that use differing polarization, or a method of dividing a region into communication areas where a first portion of each communication area communicates with a first polarization and a second portion of the communication area communicates with a second polarization such that adjacent portions of communication areas of different communication circuits use the same polarization, and therefore does not show what is covered in claims 21 and 31.

Applicant respectfully contends that claims 1, 12, 21, and 31 as pending have been shown to be patentably distinct from the cited reference. As claims 2, 15, 22, and 34 depend from and further define patentably distinct claims 1, 12, 21, and 31, these claims are also believed to be

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allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) and allowance of claims 1-2, 12, 15, 21-22, 31, and 34.

The Examiner rejected claims 3-4, 13-14, 23-24, and 32-33, under 35 U.S.C. § 102(e) as being anticipated by Bossard et al., stating that Bossard et al. further discloses the first polarization comprises horizontal and the second is vertical.

Applicant respectfully traverses this rejection and requests reconsideration of the claims 3-4, 13-14, 23-24, and 32-33.

As claims 3-4, 13-14, 23-24, and 32-33 depend directly or indirectly from and further define patentably distinct claims 1, 12, 21, and 31, Applicant respectfully contends that claims 3-4, 13-14, 23-24, and 32-33 are also believed to be allowable. Accordingly, Applicants respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) and allowance of claims 3-4, 13-14, 23-24, and 32-33.

The Examiner rejected claims 5 and 25, under 35 U.S.C. § 102(e) as being anticipated by Bossard et al., stating that Bossard et al. further discloses the first and second portion of each communication area, comprises approximately one half of the communication area.

Applicant respectfully traverses this rejection and requests reconsideration of the claims 5 and 25.

As claims 5 and 25 depend indirectly from and further define patentably distinct claims 1 and 21, Applicant respectfully contends that claims 5 and 25 are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) and allowance of claims 5 and 25.

The Examiner rejected claims 6-7, 16, 26, and 35 under 35 U.S.C. §102(e) as being anticipated by Bossard et al., stating that Bossard et al. discloses a numbers of sectors in each communication area, each sector communicating on a subband of a frequency spectrum.

Applicant respectfully traverses this rejection and requests reconsideration of the claims 6-7, 16, 26, and 35.

As claims 6-7, 16, 26, and 35 depend indirectly from and further define patentably distinct claims 1, 12, 21, and 31, these claims are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) and allowance of claims 6-7, 16, 26, and 35.

The Examiner rejected claims 8-11, 17-20, 27-30, and 36-39 under 35 U.S.C. §102(e) as being anticipated by Bossard et al., stating that Bossard et al. discloses a numbers of sectors in each communication area, each sector communicating on a subband of a frequency spectrum.

Applicant respectfully traverses this rejection and requests reconsideration of the claims 8-11, 17-20, 27-30, and 36-39.

As claims 8-11, 17-20, 27-30, and 36-39 depend indirectly from and further define patentably distinct claims 1, 12, 21, and 31, Applicant respectfully contends that claims 8-11, 17-20, 27-30, and 36-39 are also believed to be allowable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) and allowance of claims 8-11, 17-20, 27-30, and 36-39.

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**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 312-2207.

Respectfully submitted,

Date: 12/14/01

  
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**MARKED-UP VERSIONS OF AMENDMENTS**

**IN THE CLAIMS**

1. (Once Amended) A communication system comprising:

a number of communication circuits disposed to divide a region into communication areas;

wherein each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area; and

wherein adjacent portions of communication areas [of]between different communication circuits use the same polarization.

21. (Once Amended) A method comprising:

dividing a region into a number of communication areas, each communication area including a communication circuit;

communicating using a first polarization in a first portion of each communication area;

communicating using a second polarization in a second portion of each communication area; and

wherein adjacent portions of communication areas [of the]between different communication circuits use the same polarization.